

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) An electrical apparatus having a cooling system, the apparatus comprising:

- a first cover defining an enclosure for housing part of the electrical apparatus to be cooled;
- a second cover substantially enclosing the first cover to define a surrounding space therebetween, the surrounding space having an inlet and an outlet;
- first circulation means for causing air to circulate in the enclosure; and
- second circulation means for causing a cooling fluid to circulate around the surrounding space between the first and second cover;

heat transfer means between the enclosure and the surrounding space, such that heat is transferred from the enclosure to the cooling fluid in the surrounding space and out of the outlet; and

- a base plate on which the first cover is mounted, the base plate having one or more apertures communicating with the surrounding space; and

wherein the second circulation means are arranged outside of the surrounding space, such that there is a flow of cooling fluid adjacent the enclosure, through the one or more apertures and through the surrounding space.

2. (Original) An electrical apparatus according to claim 1, wherein the base plate and the first cover together define the enclosure for the electronic apparatus, and wherein the cooling system comprises a heat exchange structure disposed on the base plate outside the enclosure in the flow of cooling fluid.

3. (Currently amended) An electrical apparatus according to claim 1 ~~or~~ 2, wherein the second circulation means comprise one or more fans mounted on the base plate.

4. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, comprising a restriction in the flow of cooling fluid in the region of the apertures, such that fluid pressure forces cooling fluid through the apertures.

5. (Original) An electrical apparatus according to claim 4, wherein the restriction comprises a heat transfer structure.

6. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, comprising:
a partition defining an enclosure for a second part of the electrical apparatus that is to be cooled, the partition being attached to the base plate; and
a heat exchange structure disposed in the flow of cooling fluid and arranged to draw heat from the second part of the electrical apparatus.

7. (Original) An electrical apparatus according to claim 6, wherein the second part of the apparatus is situated on the opposite side of the base plate to the first part.

8. (Currently amended) An electrical apparatus according to claim 6 ~~or 7~~, wherein the second part of the apparatus comprises a vacuum tube device.

9. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the heat transfer means comprises a first heat exchange structure disposed on the inside of the first cover, within the enclosure.

10. (Currently amended) A electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the heat transfer means comprises a second heat exchange structure disposed on the outside of the first cover, within the surrounding space.

11. (Original) An electrical apparatus according to claim 10, wherein the first and second heat exchange structures are mounted in correspondence with each other on opposite sides of the first cover.

12. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, comprising an internal cover mounted in the enclosure creating a circulating fluid flow path in the enclosure.

13. (Original) An electrical apparatus according to claim 12, wherein the first circulation means are mounted on the internal cover.

14. (Currently amended) An electrical apparatus according to claim 12 ~~or 13~~, wherein the first cover comprises a heat exchange structure on its inside surface, within the enclosure, and wherein the internal cover extends in the enclosure such that the circulating fluid flow path passes through the heat exchange structure.

15. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, comprising path defining means disposed in the surrounding space defining a circulating path for the flow of the cooling fluid, between the apertures and an outlet.

16. (Original) An electrical apparatus according to claim 15, wherein the path defining means comprises a ridge disposed on the first cover.

17. (Currently amended) An electrical apparatus according to claim 15 ~~or 16~~, wherein the path defining means constrain the cooling fluid to flow substantially over the entirety of the surface of the enclosure.

18. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, comprising a breather tube housed in the first surface, a chamber in communication with the breather tube and with the enclosure, and a desiccant material located in the chamber.

19. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, having a fluid inlet and a fluid outlet in communication with the surrounding space.

20. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the cooling fluid is air.

21. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the first cover is metal.

22. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the second cover is a plastic material.

23. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the first and second cover have smoothed corners.

24. (Currently amended) An electrical apparatus according to claim 1 ~~any preceding claim~~, wherein the outlet joins the fluid flow path adjacent the enclosure.

25. (Currently amended) A high power radio frequency amplifier comprising the electrical apparatus of claim 1 ~~any preceding claim~~.

26. (Currently amended) A satellite uplink amplifier comprising the electrical apparatus of claim 1 ~~any of claims 1 to 25~~.